

## EAST Search History

| Ref # | Hits | Search Query   | DBs                        | Default Operator | Plurals | Time Stamp       |
|-------|------|--|----------------------------|------------------|---------|------------------|
| L1    | 2    | (partially adj removed and gate adj structure and partially adj etched adj gate).clm.  | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2006/10/24 07:39 |
| L2    | 502  | 438/33, 68,113-114,458, 460-465.ccls.  | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2006/10/24 07:41 |
| L3    | 5088 | 438/33,68,113-114,458, 460-465.ccls.   | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2006/10/24 07:41 |
| L4    | 758  | 3 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) with (polish\$3 grind\$3) | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2006/10/24 07:42 |
| L5    | 315  | 4 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) with (laser irradiat\$3)  | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2006/10/24 07:47 |

## EAST Search History

| Ref # | Hits   | Search Query  | DBs                        | Default Operator | Plurals | Time Stamp       |
|-------|--------|---|----------------------------|------------------|---------|------------------|
| L2    | 502    | 438/33, 68,113-114,458, 460-465.ccls.   | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2006/10/24 07:41 |
| L3    | 5088   | 438/33,68,113-114,458, 460-465.ccls.  | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2006/10/24 07:41 |
| L4    | 758    | 3 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) with (polish\$3 grind\$3)                          | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2006/10/24 07:42 |
| L5    | 315    | 4 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) with (laser irradiat\$3)                           | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2006/10/24 07:47 |
| S5    | 129251 | semiconductor and ((dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) near5 (wafer substrate workpiece))    | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2006/07/12 18:25 |
| S14   | 24785  | S5 and ((dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity single) near5 (line groove alignment adj mark))                     | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2005/11/17 15:06 |
| S15   | 1142   | S14 and ((dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity singleline groove alignment adj mark) near5, (polish\$3 blast\$5)) | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2005/07/07 08:42 |
| S16   | 1530   | S14 and ((dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity single line groove alignment adj mark) near5 (polish\$3 blast\$5)) | US-PGPU B; USPAT; EPO; JPO | OR               | ON      | 2005/07/07 08:41 |

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|     |     |  |                            |    |    |                  |
|-----|-----|--|----------------------------|----|----|------------------|
| S17 | 67  | S16 and ((dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity singleline groove alignment adj mark) near5 (laser near5 beam)) | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 13:49 |
| S18 | 22  | (gate near5 silicide) with (silicide near5 protect\$3 near3 mask)  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:05 |
| S19 | 1   | 10/456985  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 13:55 |
| S20 | 1   | 10/758289  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 13:56 |
| S21 | 2   | (gate near5 silicide) with (silicide near5 protect\$3 near3 mask) with simultaneously  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:25 |
| S22 | 275 | (gate near5 silicide) with simultaneously  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:04 |
| S23 | 2   | S22 and simultaneously with (silicide near5 protect\$3 near3 mask)   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:05 |
| S24 | 5   | S22 and (silicide near5 protect\$3 near3 mask)   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:11 |
| S25 | 22  | S22 and (silicid\$6 near5 protect\$3 near3 (mask\$3 layer))  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:18 |
| S26 | 5   | S22 and (silicid\$6 near5 protect\$3 near3 (mask\$3 layer)) with simultaneously  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:22 |
| S27 | 5   | (gate near5 silicide) with (silicide near5 protect\$3 near3 (mask\$3 layer)) with simultaneously   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:35 |
| S28 | 0   | (image near3 sensor) with (implantation implanting implant\$3)   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:36 |

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|     |        |  |                            |    |    |                  |
|-----|--------|--|----------------------------|----|----|------------------|
| S29 | 0      | (image near3 sesor) with (implantation implating implant\$3)   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:36 |
| S30 | 260    | (image near3 sensor) with (implantation implating implant\$3)  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:36 |
| S31 | 143    | S30 and (resist photoresist mask\$4) with (implantation implating implant\$3)  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:42 |
| S32 | 40     | S31 and (resist photoresist mask\$4) with (thick thickness)  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:43 |
| S33 | 40     | S32 and (resist photoresist mask\$4 thick thickness)   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:43 |
| S34 | 32     | S33 and (resist photoresist mask\$4 thick thickness) near5 first   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:44 |
| S35 | 28     | S34 and (resist photoresist mask\$4 thick thickness) near5 second  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/08 08:15 |
| S36 | 1      | 10/745988  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/07 14:47 |
| S37 | 0      | 10/816729  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/08 09:07 |
| S38 | 1      | 10/816958  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/07/08 09:07 |
| S39 | 266798 | (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) near5 (wafer substrate workpiece)                       | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/10 12:53 |
| S40 | 52647  | S39 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) near5 (mark line groove void dicing near3 line) | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/10 15:31 |

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|     |        |   |                                  |    |    |                     |
|-----|--------|---|----------------------------------|----|----|---------------------|
| S42 | 7133   | S40 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single mark line groove void dicing near3 line) near5 laser        | US-PGPU<br>B; USPAT;<br>EPO; JPO | OR | ON | 2005/11/10<br>12:57 |
| S43 | 9928   | S40 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single mark line groove void dicing near3 line) near5 (laser beam) | US-PGPU<br>B; USPAT;<br>EPO; JPO | OR | ON | 2005/11/10<br>12:49 |
| S44 | 9300   | S40 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single mark line groove void dicing near3 line) near4 (laser beam) | US-PGPU<br>B; USPAT;<br>EPO; JPO | OR | ON | 2005/11/10<br>12:49 |
| S45 | 8342   | S40 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single mark line groove void dicing near3 line) near3 (laser beam) | US-PGPU<br>B; USPAT;<br>EPO; JPO | OR | ON | 2005/11/10<br>12:49 |
| S46 | 97293  | (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) near5 (laser irradiat\$3)  | US-PGPU<br>B; USPAT;<br>EPO; JPO | OR | ON | 2005/11/10<br>12:50 |
| S47 | 38078  | (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) near (laser irradiat\$3)   | US-PGPU<br>B; USPAT;<br>EPO; JPO | OR | ON | 2005/11/10<br>12:51 |
| S48 | 150634 | (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) with (laser irradiat\$3)   | US-PGPU<br>B; USPAT;<br>EPO; JPO | OR | ON | 2006/10/24<br>07:47 |
| S49 | 34413  | (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) with (polish\$3)   | US-PGPU<br>B; USPAT;<br>EPO; JPO | OR | ON | 2005/11/10<br>12:59 |

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|     |       |  |                            |    |    |                  |
|-----|-------|--|----------------------------|----|----|------------------|
| S50 | 3193  | (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) with (blasting)                           | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/10 12:52 |
| S51 | 37455 | S49 or S50   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/10 12:52 |
| S52 | 4772  | S48 and S51  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/10 12:53 |
| S53 | 2541  | S52 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) near5 (wafer substrate workpiece) | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/10 12:55 |
| S54 | 1165  | S53 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) near5 (die chip "IC")             | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/10 12:56 |
| S55 | 4170  | (mark line groove void dicing near3 line) near5 (laser near5 irradiat\$3)  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/10 12:58 |
| S56 | 87    | S55 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) with (polish\$3)                  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/10 15:29 |
| S57 | 1     | 10/601310  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/10 14:08 |
| S58 | 151   | S55 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) with (polish\$3 grind\$3)         | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2006/10/24 07:42 |

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|     |        |  |                            |    |    |                  |
|-----|--------|--|----------------------------|----|----|------------------|
| S59 | 168    | S39 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) near5 (mark line groove void dicing line perforat\$3) near5 (laser near3 irradiat\$3) | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/10 15:43 |
| S60 | 37     | S59 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) with (polish\$3 grind\$3)   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/17 15:41 |
| S61 | 1      | (separation adj groove near5 laser adj beam and polishing and individually adj dividing). clm.   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/10 15:55 |
| S62 | 267261 | ((dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) near5 (wafer substrate workpiece))   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/17 15:06 |
| S63 | 179956 | ((dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) near2 (wafer substrate workpiece))   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/17 15:06 |
| S64 | 23815  | S63 and ((dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity single) near2 (line groove alignment adj mark))   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/17 15:07 |
| S65 | 61     | S64 and ((laser near3 beam near irradiat\$3) near2 (line groove alignment adj mark))   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/17 15:11 |
| S66 | 12     | S65 and ((laser near3 beam near irradiat\$3 line groove alignment adj mark) with (grind\$3 polish\$4 blast\$3))  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/17 15:11 |
| S67 | 623    | ((laser near3 beam near irradiat\$3) near2 (line groove alignment adj mark))   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/17 15:11 |

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|          |        |  |                            |    |    |                  |
|----------|--------|--|----------------------------|----|----|------------------|
| S68      | 19     | S67 and ((laser near3 beam near irradiat\$3 line groove alignment adj mark) with (grind\$3 polish\$4 blast\$3))  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/17 15:11 |
| S69      | 267261 | (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) near5 (wafer substrate workpiece)   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/17 15:41 |
| S70      | 168    | S69 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) near5 (mark line groove void dicing line perforat\$3) near5 (laser near3 irradiat\$3) | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/17 15:41 |
| S71      | 37     | S70 and (dice dicing separation separat\$3 cutting cut\$2 dividing divid\$3 singularity individual single) with (polish\$3 grind\$3)   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/17 15:43 |
| S12<br>3 | 12     | "6294439"  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/18 12:05 |
| S12<br>4 | 1      | 10/839430  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/18 12:06 |
| S12<br>5 | 3      | "6653698"  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2005/11/18 12:07 |
| S12<br>6 | 473    | 438/33, 68,113-114,458, 460-465.ccls.  | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2006/10/24 07:41 |
| S12<br>7 | 4916   | 438/33,68,113-114,458, 460-465.ccls.   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2006/10/24 07:41 |
| S12<br>8 | 1563   | S127 and laser   | US-PGPU B; USPAT; EPO; JPO | OR | ON | 2006/07/12 18:25 |



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|          |      |   |  |    |     |                     |
|----------|------|---|--|----|-----|---------------------|
| S12<br>9 | 1342 | S128 and ((dice dicing<br>separation separat\$3 cutting<br>cut\$2 dividing divid\$3<br>singularity individual single)<br>near5 (wafer substrate<br>workpiece))    | US-PGPU<br>B; USPAT;<br>EPO; JPO                                       | OR | ON  | 2006/07/12<br>18:26 |
| S13<br>0 | 1075 | S129 and ((dice dicing<br>separation separat\$3 cutting<br>cut\$2 dividing divid\$3<br>singularity individual single<br>wafer substrate workpiece)<br>with laser) | US-PGPU<br>B; USPAT;<br>EPO; JPO                                       | OR | ON  | 2006/07/12<br>18:27 |
| S13<br>1 | 418  | S129 and ((line groove ) with<br>laser)   | US-PGPU<br>B; USPAT;<br>EPO; JPO                                       | OR | ON  | 2006/07/13<br>06:38 |
| S13<br>2 | 1    | 10/601310   | US-PGPU<br>B; USPAT;<br>EPO; JPO                                       | OR | ON  | 2006/07/13<br>06:38 |
| S13<br>3 | 1    | "6558975".PN.   | USPAT;<br>USOCR  | OR | OFF | 2006/07/13<br>10:39 |
| S13<br>4 | 1    | "6500047".PN.   | USPAT;<br>USOCR  | OR | OFF | 2006/07/13<br>10:40 |
| S13<br>5 | 1    | "6293270".PN.   | USPAT;<br>USOCR  | OR | OFF | 2006/07/13<br>10:40 |
| S13<br>6 | 1    | "6083811".PN.   | USPAT;<br>USOCR  | OR | OFF | 2006/07/13<br>10:41 |
| S13<br>7 | 1    | "5888883".PN.   | USPAT;<br>USOCR  | OR | OFF | 2006/07/13<br>10:41 |
| S13<br>8 | 1    | "5369060".PN.   | USPAT;<br>USOCR  | OR | OFF | 2006/07/13<br>10:53 |
| S13<br>9 | 1    | "5219796".PN.   | USPAT;<br>USOCR  | OR | OFF | 2006/07/13<br>10:53 |
| S14<br>0 | 1    | 10/630969   | US-PGPU<br>B; USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWEN<br>T;<br>IBM_TDB | OR | OFF | 2006/07/13<br>18:25 |

### EAST Search History

|          |   |           |  |    |     |                     |
|----------|---|-----------|--|----|-----|---------------------|
| S14<br>1 | 1 | 10/459699 | US-PGPU<br>B; USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWEN<br>T;<br>IBM_TDB | OR | OFF | 2006/07/13<br>18:25 |
|----------|---|-----------|--|----|-----|---------------------|